

NEW COMBINATIONS AND SYNONYMIES IN PALEARCTIC AND
NEARCTIC SCIOMYZIDAE (DIPTERA)

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Abstract.—*Tetanocera scutellata* Matsumura, 1916, is transferred to the genus *Coremacera*; *Sciomyza goberti* Pandellé, 1902, is transferred to the genus *Pherbellia*, the holotype is redescribed, and the male genitalia are figured; *Pherbellia lapponica* (Ringdahl), 1948, is recorded from North America; *Pherbellia villiersi* Séguy, 1941, is placed as a synonym of *P. nana* (Fallén), 1820; *Sciomyza humilis* Loew, 1876, is placed as a synonym of *Pherbellia parallela* (Walker) 1852; *Tetanocera mallochii* Steyskal, 1959, is placed as a synonym of *T. griseicollis* Frey, 1924; and distributional records for *Tetanocera freyi* Stackelberg, 1963, and *T. silvatica* Meigen, 1830, in North America are given.

The following taxonomic data and hypotheses are presented, as one of a series of papers, in preparation for an analysis of the classification and phylogeny of the genera of snail-killing flies (Sciomyzidae) of the world.

Coremacera scutellata (Matsumura), 1916 (*Tetanocera*)
NEW COMBINATION

The female holotype, in the Hokkaido University Collection (Sapporo, Japan), is in perfect condition except both wings are cracked from the middle of the costal margin into the submarginal cell, and there is verdigris above and below the thorax. The specimen is labeled: Japan, Matsumura (reverse side—Okinawa, XI.07) (white label); *Tetanocera scutellata* (white label); Type, Matsumura (red label). I have labeled the specimen, *Coremacera scutellata* (Matsumura), d. L. Knutson, 1979.

The specimen closely fits the original description except: Middle of face subshiny, whitish pruinose, with brownish area above carina; sides of face yellowish pruinose; frontal spot oval, surrounding anterior fronto-orbital bristle, barely reaching posterior fronto-orbital bristle on right side, not reaching it on left side; lunula, broad midfrontal stripe, and area between orbito-antennal and frontal spots shiny.

In Elberg's key (1968), the type of *C. scutellata* runs to *C. ussuriensis* Elberg (Lebeche, Primorski Krai, far eastern USSR) and can be distinguished from the description of *C. ussuriensis* only by some slight differences in color.

According to my notes taken during a 1973 visit to the Zoological Institute in Leningrad, there is a specimen labeled *Tetanocera scutellata* in that collection. There is no information on this species in J. Verbeke's notes (at the Institut National des Sciences Naturelles, Brussels) of his examinations of the collections in Leningrad and Moscow.

The holotype of *C. scutellata* is distinct from three specimens of an undescribed *Coremacera* species in the U.S. National Museum (USNM) (Chas Yang, Chili, China, 13.IX.1921 Jacot, ♀; Hangchow, 30.III.1929, ♀; and Chas Yang, 6.IX.1921, sex unknown—abdomen missing) in having the following characters: Basal two-thirds of submarginal cell open, without spots; posthumeral bristle as large as humeral bristle (hairlike in the undescribed specimens); front femur with an irregular, double series of strong bristles along the entire dorsal surface (only 2–4 strong bristles dorsally toward apex in the undescribed specimens); bristles on posteroventral surface of hind femur extending from apex to midlength (restricted to 2–4 near apical third in the undescribed specimens).

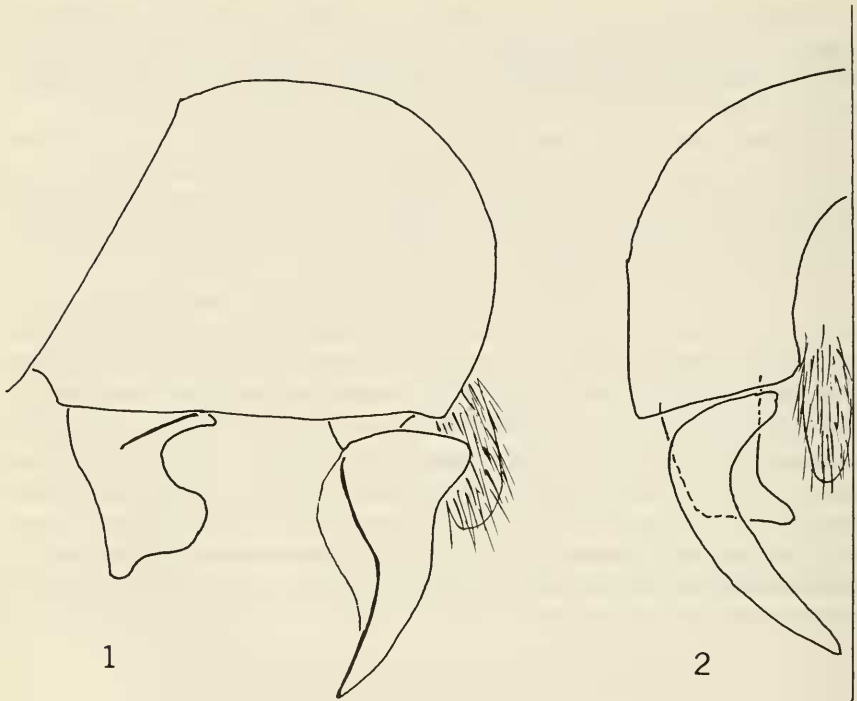
Pherbellia goberti (Pandellé), 1902 (*Sciomyza*)

Figs. 1, 2

Pherbellia goberti (Pandellé), described from Landes, France, is apparently known only from the male holotype in the Paris Museum. The specimen is labeled, 2321 (white label), and *Sciomyza goberti* Pand. (white label folded in half).

The specimen was apparently originally glued to a paper point, and has been carefully reglued at some time in the past. Head, wings, and bristles in good condition; left front leg missing; right front, middle, and hind legs separated from specimen and glued to the point; abdomen prepared with sodium hydroxide and preserved in glycerine in plastic genitalia vial (prepared and dissected by LK).

Description.—Yellowish brown. Face vertical; cheeks narrow, at narrowest point almost as wide as greatest width of 3rd antennal segment. Eyes very large, rounded dorsally, strongly angular ventrally. Frons strongly narrowed anteriorly, width at antennae about ½ the distance between outer vertical bristles; matt, yellowish between orbital plates, brownish from anterior fronto-orbital bristles to antennae, hairs between orbital plates and orbital margin as well as those on middle of frons black, hairs yellowish on lower frons near antennae. Ocellar triangle and orbital plates medium brown, subshiny, with sparse grayish pollinosity; midfrontal stripe not quite



Figs. 1, 2. *Pherbellia goberti*, holotype male, genitalia. 1, Lateral view. 2, Posterior view.

reaching level of anterior fronto-orbital bristles. Orbital margin from antennae to posterior fronto-orbitals narrowly margined with whitish pruinosity. Two strong ocellar bristles, about equal in length to post-ocellars and inner verticals; outer verticals slightly shorter. First antennal segment minute, hidden; 2nd antennal segment yellowish brown, $\frac{1}{3}$ length of 3rd segment; 3rd antennal segment unicolorous yellowish brown, short, rounded apically, upper and lower margins parallel; arista yellowish brown, with medium-length, sparse, darkish hairs, somewhat longer and denser on dorsal surface. Middle of face and area along facial orbits pollinose greyish-brown; lower face on each side matt, yellowish brown, with short black hairs as on lower frons. Palpi yellowish brown, each with 3 moderately-sized, blackish bristles.

Thoracic dorsum subshiny yellowish brown with faint pollinosity, indistinct dark stripes anteriorly; 2 pairs of dorsocentral bristles, anterior pair somewhat shorter than posterior pair; 1 humeral; 1 posthumeral; 2 notopleural; 1 supra-alar; 2 postalar; no prescutellar; 2 pairs of scutellar bristles. Propleural bristle strong, with 3 short hairs above each front coxa. Meso-

pleuron bare. Pteropleuron with 2 large and 2 medium-sized bristles on left side. Prosternum bare.

Front coxa with a very strong bristle just above middle at outer edge, hind coxa bare above posteriorly. Front femur yellow basally, brownish on apical 2/5; front tibia brownish on apical 2/3, becoming dark brown and concolorous with dark brown tarsi. Middle and hind legs yellow. Front femur with several dorsal bristles toward apex, middle femur with 1 weak bristle outstanding on anterior surface below midlength, and hind femur with 2 outer dorsal bristles toward apex.

Wing membrane and veins yellowish, crossveins imperceptibly clouded, anal vein reaches wing margin, ta below apex of r_1 and before middle of wing. Halter yellow.

Male genitalia, Figs. 1 and 2. Posterior surstylus without bristles; in lateral view elongate, triangular with a low, conical, posteriorly directed projection just beyond base and a narrow, lightly pigmented lamina along most of anterior margin; pincerlike in posterior view, bent mesially at 90° angle at basal 1/3. Anterior surstylus with very weak marginal hairs; in lateral view mitten-shaped, with short lobes; general outline somewhat longer than broad, basally with a posteriorly-directed lobe. Aedeagal and ejaculatory apodemes subequal, very large, well sclerotized.

Remarks.—In general appearance, *P. goberti* looks like a small species of *Sciomyza*, but it has the typical characters of *Pherbellia*. The characters cited by Séguy (1934) in his key to species of "*Sciomyza*" and in his brief description agree with the type-specimen except the third antennal segment is yellowish brown, not ". . . roux, tant au plus étroitement noirci à l'apex," and the pteropleura have 3 or 4 bristles, not 2 or 3. Grensted (1946) quoted a personal (*in litt.*) communication from J. E. Collin, "Pandellé's *S. pallidiventris* (5–7 mm.) was probably *sordida* Hendel, and not *pallidiventris* Fln., and I suspect that his *S. goberti* was the true *pallidiventris*." Collin was confused on this point—*P. goberti* and *P. pallidiventris* are abundantly distinct.

Pherbellia lapponica (Ringdahl), 1948 (*Sciomyza*)

Pherbellia lapponica was described from Gallivare, northern Sweden. I have seen additional European specimens from Finland (Paanajarvi, Petsamo, and Muonio) and Sweden (Jamtland, Lulea Lappmark, Lykseele Lappmark, Tornea Lappmark, Norrbotten, and Vasterbotten). I reared this species through the complete life cycle from adults collected near Kvikkjokk, Norrbotten, Sweden in June, 1967.

The following new records are from specimens in the USNM: *Alaska*: N. Coast, Prudhoe Bay; 16.VI.1971, 1 ♂, No. 46; 20.VI.1971, 1 ♂, No. 119; 4.VII.1971, 1 ♂ 1 ♀, No. 256; 8.VII.1971, 1 ♀, No. 311; Deyrup.

Pherbellia nana (Fallén), 1820 (*Sciomyza*)

Pherbellia villiersi Séguéy, 1941. NEW SYNONYMY.

The holotype and cotypes of *Pherbellia villiersi* Séguéy (3 females, not males as published by Séguéy) were examined in the Muséum National d'Histoire Naturelle, Paris. One female is labeled: Dj. Toubkal, Tachdirt, 2,500 m. (white label), Maroc, 15-13 Aout (white label), 251 (white label), Museum Paris, 1938, R. Paulian et Villiers (light green label), TYPE (red label), *Ditaenia villiersi*, Type. E. Séguéy vid. (white label). There are two females labeled as above, but without the latter two labels, and with the following label, *Pherbellia villiersi*, Cotype, E. Séguéy det. 19.

All three specimens are greasy, and the color patterns of the body are indistinct. The disc of the wing is not as uniformly dark as figured by Séguéy. The wing pattern is very similar to typical *P. nana*, but somewhat darker and slightly more extensive, particularly in the holotype specimen. The single specimen of *P. nana* in the general collection in Paris (a ♀ from Kaltwasser, det. Th. Becker) is a lightly-colored specimen with an unusually faint wing pattern. I added the following label: *Pherbellia nana* (Fallén). Det. L. Knutson 1980.

Elberg (1978) examined the hypopygium of the type-specimen of *Sciomyza reticulata* Thomson (1869) and concluded that it is identical with the hypopygium of *Pherbellia nana*. On the basis of the wing pattern, i.e., the presence of spots in cells A, Cu, AM, and D in addition to those in R, R1, R3, and R5, Elberg considered the type-specimen of *S. reticulata* (from Hong Kong) and other Asian specimens that he studied (Transbaikal (Burjatien) to Ussuri Region) to represent a distinct subspecies, *Pherbellia nana reticulata* (Thomson).

Pherbellia parallela (Walker), 1852 (*Sciomyza*)

Sciomyza humilis Loew, 1876. NEW SYNONYMY.

I rediscovered the type-specimen of *Sciomyza parallela* Walker in a drawer of uncurated material at the British Museum (N.H.) in February, 1976. The specimen, a male with the head missing but otherwise in good condition, is labeled, *parallela*, US, 68 4, *parallela* N. Amer. Walk. The genitalia were not dissected but chaetotaxy, color, and other characters clearly show it to be the same species as *Sciomyza humilis* Loew, 1876. This is a Nearctic species.

Tetanocera griseicollis Frey, 1924

Tetanocera mallochi Steyskal, 1959. NEW SYNONYMY.

Tetanocera mallochi was described by Steyskal (1959) from specimens from Manitoba (holotype and allotype), Alaska, Northwest Territories, Al-

berta, Quebec, Labrador, and New Hampshire. I have compared the male holotype of *T. griseicollis* Frey (Helsinki University Museum; genitalia missing) from Dudinka, Siberia, with the following specimens from the Palearctic and Nearctic regions:

PALEARCTIC: *USSR*: Siberia, Verschininsk, 69°5', 1 ♂, Trybom, Naturhistoriska Riksmuseet, Stockholm. *Sweden*: T. Lpm., S. E. Abisko, Jukkasjarvi, 2.VII.1966, 1 ♀, Hedstrom; Pessinenjaure, Jukkasjarvi, 9.VII.1966, 1 ♀, Hedstrom.

NEARCTIC: *Canada*: NORTHWEST TERRITORIES: Musk Ox Lake, 64°45'N 108°10'W, 20.VII.1953, 1 ♀, Chillcott, Canadian National Collection, Ottawa (CNC) (paratype). Ekalulia Is., Bathurst Inl., 12.VIII.1966, 2 ♂ 3 ♀, Shewell, CNC. Aklavik, 25.VII.1931, 1 ♂, USNM. MANITOBA: Fort Churchill, 21.VII.1952, 1 ♂; 12.VII.1952, 1 ♂; Churchill, 8.VII.1952, 1 ♂ 1 ♀, Chillcott, USNM (paratypes). QUEBEC: Indian House Lake, 20.VII.1954, 1 ♂, Richards, USNM (paratype). *USA*: ALASKA: 15 mi. W. Nebesna, 3.VII.1948, 2 ♂ 1 ♀, Sailer, USNM. Polychrome Pass, 3.VII.1954, 1 ♂ 1 ♀, Frohne, USNM. Richardson Hwy., M. P. 183, 24.VII.1948, 1 ♀, Sailer, USNM. COLORADO: Cameron Pass, 18.VIII.1952, 1 ♂, Severin, CU. WYOMING: Canyon Village, Yellowstone National Park, 21.VII.1971, 1 ♂, Steyskal, USNM.

I have found no specific differences among these specimens. The details of the male genitalia of Palearctic and Nearctic specimens compare exactly. A posterodorsal pre-apical bristle, slightly posterad of the last anterodorsal pre-apical bristle, is usually present on both hind femora, but it may be absent or present only on one side.

Tetanocera silvatica Meigen, 1830, and *T. freyi* Stackelberg, 1963

Cresson (1920) and Steyskal (1959) recorded *Tetanocera silvatica* Meigen from North America. In describing *T. freyi* from Luga, Yashchera, USSR, Stackelberg (1963) indicated that Steyskal's specimens of *T. silvatica* from Alaska (Fig. 29) are *T. freyi*. I have seen the following male specimens (all in the USNM) of *T. silvatica* and *T. freyi* from North America.

Tetanocera silvatica.—*USA*: ALASKA: Tanana, 7.VI.1951, Sailer (1). Matanuska Valley, 27.VI.1952, C. O. Berg (2). COLORADO: No further data (2). Rio Grande Co., Beaver Creek, 10,000 ft., 21.VI.1972, Wirth (1). WYOMING: Yellowstone Park, Apollinar Is., 8.VII.1923, Melander (2). SOUTH DAKOTA: Custer, 22.VII.1924 (1). ARIZONA: Greer, Phelps Bot. Area, 23.VI.1957, Butler & Werner (2).

Tetanocera freyi.—*USA*: ALASKA: Matanuska Valley, 27.VI.1952 (10), 1.VII.1950 (4), 8.VII.1950 (2), 2.VIII.1952 (2), Berg. *Canada*: ALBERTA: Bilby, 1.VI.1924 (1), 10.VI.1924 (1), Bryant.

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LITERATURE CITED

- Cresson, E. T. 1920. A revision of the Nearctic Sciomyzidae (Diptera, Acalypratae). Trans. Am. Entomol. Soc. 46: 27-89, 3 pls.
- Elberg, K. J. 1968. On the fauna of Sciomyzidae (Diptera) of the USSR. Izv. Akad. Nauk Est. SSR Ser. Biol. 17(2): 217-222.
- . 1978. Sciomyzidae aus der Mongolei (Diptera). Ann. Hist.-Nat. Mus. Nat. Hung. 70: 207-211.
- Fallén, C. F. 1820. *Opomyzides Sveciae*. Lund. 12 pp.
- Frey, R. 1924. Die nordpaläarktischen *Tetanocera*-Arten (Diptera: Sciomyzidae). Not. Entomol. 4: 47-53.
- Grensted, L. W. 1946. *Sciomyza sordida* Hendel (Dipt., Tetanoceridae) wrongly recorded as British. Entomol. Mon. Mag. 82: 151.
- Loew, H. 1876. Beschreibungen neuer amerikanischer Dipteren. Zeitschr. Gesamte Naturwiss. 48: 317-340.
- Matsumura, S. 1916. Thousand insects of Japan. Additamenta. Vol. 2, pp. 185-474, pls. 16-25. Tokyo.
- Meigen, J. W. 1830. Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Vol. 6, iv + 401 pp., pls. 55-66. Hamm.
- Pandellé, L. 1902. Études sur les Muscides de France, Pt. 2-3. Rev. Entomol. Caen 21: 390.
- Ringdahl, O. 1948. Bermerkungen zu schwedischen Sciomyziden. Opusc. Entomol. 13: 52-54.
- Séguy, E. 1934. Diptères (Brachycères) (Muscidae, Acalypterae, et Scatophagidae). Pt. 28. Faune de France. Lechevalier, Paris. 832 pp.
- . 1941. Recoltes de R. Paulian et A. Villiers dans le haut Atlas Marocain, 1938 (xviii note) Diptères. Rev. Fr. Entomol. 8: 25-33.
- Stackelberg, A. A. 1963. Species of the genus *Tetanocera* Dum. (Diptera: Sciomyzidae) in the European part of the USSR. Entomol. Rev. (Engl. Transl. Entomol. Obozr.) 42: 912-923.
- Steyskal, G. C. 1959. The American species of the genus *Tetanocera* Duméril (Diptera). Pap. Mich. Acad. Sci. Arts Lett. 44: 55-91.
- Thomson, C. G. 1869 [1868]. 6. Diptera. Species Nova Descripsit, pp. 443-614, Pl. 9 (=h. 12, no. 2). In K. Svenska Vetenskaps-Akademien. Kongliga Svenska Fregatten Eugénies Resa Omkring Jorden under Befäl af C. A. Virgin, Åren 1851-1853. Pt. 2: Zoologie, [Sec.] 1: Insekter. P. A. Norstedt and Soner, Stockholm. 617 pp., 9 pls.
- Walker, F. 1852. Diptera (cont.). Vol. 1, pp. 157-252, 253-414, 4 pls. (cont.) In Saunders, W. W., ed., Insecta Saundersania, London, "1856".